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09/740,231	12/18/2000	Jacek F. Gieras	60,469-031	4502

7590 11/20/2002  
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EXAMINER

ELKASSABGI, HEBA

ART UNIT PAPER NUMBER

2834

DATE MAILED: 11/20/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/740,231

Applicant(s)

GIERAS ET AL.

Examiner

Heba Elkassabgi

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If the period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 05 September 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 10-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 22 and 23 is/are allowed.
- 6) ☒ Claim(s) 1-12, 14-16 and 19-21 is/are rejected.
- 7) ☒ Claim(s) 13, 17 and 18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## DETAILED ACTION

### Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 10,16, 19,20 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by DeCesare (U.S. Patent 4488075) and in further view of Blissenbach et al. (*Development of a transverse flux traction motor in a direct drive system*).

DeCesare illustrates in Figure 1 a two-stator core portions (20) with armature coils (24) arranged onto the stator central portions (20a) with in the axial wall portions (20b and 20c) that are covering the coil with a core portion (20) and a rotor (16) comprised of permanent magnets (16). Figure 4 and 5 disclose a rotor (30) that includes a core structure (32). Whereas the rotor magnets and stator core portions interact during rotary movement. In regards to claim 19 the coil winding acts as a bonding agent. However, DeCesare does not illustrate a coil that is nestled in the core portions.

Blissenbach et al. Discloses in Figure #1 a winding (coil) that is nestled in the core portions (yoke) of the stator and that the stator coil surfaces are covered by the core portions and the coil is prewound and inserted into the stator core portions, in order to minimize the volume of the motor.

It would have been obvious to one of ordinary skill in the art to combine the reference of DeCesare with Blissenbach et al. In order to minimize the volume of the motor.

Claim 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over DeCesare (U.S. Patent 4488075) and in further view of Blissenbach et al. (Development of a transverse flux traction motor in a direct drive system) and Peck et al. (U.S. Patent 5223760) and Weh (U.S. Patent 5051641).

DeCesare illustrates in Figure 1 a two-stator core portions (20) with armature coils (24) arranged onto the stator central portions (20a) with in the axial wall portions (20b and 20c) that are covering the coil with a core portion (20) and a rotor (16) comprised of permanent magnets (16). Figure 4 and 5 disclose a rotor (30) that includes a core structure (32). Whereas the rotor magnets and stator core portions interact during rotary movement. However, DeCesare does not disclose support members that enclose part of the axial surfaces of the magnetic core portions and stator elements with slots located on the rotor core and a coil that is nestled in the core portions.

Blissenbach et al. Discloses in Figure #1 a winding (coil) that is nestled in the core portions (yoke) of the stator, in order to minimize the volume of the motor.

Peck et al. illustrate in Figure 2 stator elements (stator support elements) (24 and 26) with a plurality of slots (31), that are coaxially located with the rotor core (36), in order to utilize an axially compact design.

Weh discloses in Figure 1 magnetic cores (Mq1) supported by pole elements (support members) (W1' and W2'), for the purpose of greater flux concentration.

It would have been obvious to one of ordinary skill in the art to combine the reference of DeCesare with Blissenbach et al. in order to minimize the volume of the motor and DeCesare with Peck et al. and Weh in order to receive greater flux concentration and to utilize an axially compact design.

Claim 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over DeCesare (U.S. Patent 4488075) and in further view of Blissenbach et al. (Development of a transverse flux traction motor in a direct drive system) and Lange et al. (U.S. 5777418).

DeCesare illustrates in Figure 1 a two-stator core portions (20) with armature coils (24) arranged onto the stator central portions (20a) with in the axial wall portions (20b and 20c) that are covering the coil with a core portion (20) and a rotor (16) comprised of permanent magnets (16). Figure 4 and 5 disclose a rotor (30) that includes a core structure (32). Whereas the rotor magnets and stator core portions interact during rotary movement. However, DeCesare does not disclose support members that enclose part of the axial surfaces of the magnetic core portions and a coil that is nestled in the core portions.

Blissenbach et al. Discloses in Figure #1 a winding (coil) that is nestled in the core portions (yoke) of the stator, in order to minimize the volume of the motor.

Lange et al. discloses in Figure 1 a stator core portion (stator element) (10a and 10b) comprised of sintered powder material (soft iron) (60 or permanent magnets (5), in order to offer an advantage of reducing floor gap while providing the same freedom on the floor.

It would have been obvious to one of ordinary skill in the art to combine DeCesare with Lange et al. in order to reduce floor gap while providing the same freedom on the floor and the reference of DeCesare with Blissenbach et al. in order to minimize the volume of the motor.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over DeCesare (U.S. Patent 4488075) and in further view of Blissenbach et al. (Development of a transverse flux traction motor in a direct drive system) and von Zwegbergk (U.S. Patent 5117142).

DeCesare illustrates in Figure 1 a two-stator core portions (20) with armature coils (24) arrange onto the stator central portions (20a) with in the axial wall portions (20b and 20c) that are covering the coil with a core portion (20) and a rotor (16) comprised of permanent magnets (16). Figure 4 and 5 disclose a rotor (30) that includes a core structure (32). Whereas the rotor magnets and stator core portions interact during rotary movement. However, DeCesare does not disclose support members that enclose part of the axial surfaces of the magnetic core portions and a coil that is nestled in the core portions.

Blissenbach et al. Discloses in Figure #1 a winding (coil) that is nestled in the core portions (yoke) of the stator, in order to minimize the volume of the motor.

von Zweybergk illustrates in figure 2 stator elements made of laminated sheet metal, in order to produce at a higher efficiency.

It would have been obvious to one of ordinary skill in the art to combine DeCesare with von Zweybergk in order for a higher level of efficiency of power and the reference of DeCesare with Blissenbach et al. in order to minimize the volume of the motor.

#### ***Allowable Subject Matter***

Claims 13,17 and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 22-23 allowed. Prior Art does not disclose two support members with a plurality of radially inwardly projecting spacer portions, and the stator core portions projections and the spacer portions being interposed such that outward axial surfaces on the core projections are not covered by the support members.

#### ***Response to Arguments***

Applicant's arguments with respect to claims 10-21 have been considered but are moot in view of the new ground(s) of rejection.

In the applicants remarks of Claims 11 and 12 that the teachings of Peck et al. is no analogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, the references are both dynamoelectric machines, which generate a current from the rotation of the magnet. In which one of ordinary skill in the art would look at any dynamoelectric machine in order to improve upon the structure of the rotor and stator.

In regards to Claims 11,12, 14 and 15 not being of the same motivation, as long as some motivation or suggestion to combine the references is provided by the prior art taken as a whole, the laws does not require that the references be combined for ht reasons contemplated by the inventor, *In re Beatie*, 974 F2d 1009, 1312, 24 USPQ 2d 1040.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Heba Elkassabgi whose telephone number is (703) 305-2723. The examiner can normally be reached on M-Th (6:30-3:30), and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308-1371. The fax phone



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numbers for the organization where this application or proceeding is assigned are (703) 305-3431 for regular communications and (703) 305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

HYE

November 14, 2002

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